

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
DEFERRED COMPENSATION STANDARD & POOR'S 500 EQUITY INDEX FUND -
INTERNALLY MANAGED**

February 14, 2005

This Policy is effective immediately upon adoption and supersedes all previous Deferred Compensation Standard & Poor's 500 Equity Index Fund - Internally Managed investment policies.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for the Deferred Compensation Standard & Poor's 500 Equity Index Fund - Internally Managed ("the Portfolio" or "the Fund"). The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Fund. Additionally, use of this Policy provides assurance that there is sufficient flexibility in the management process controlling investment risks and returns associated with deferred compensation funds.

II. STRATEGIC OBJECTIVE

Obtaining broad domestic equity market exposure achieved by closely tracking the designated benchmark index is the strategic objective of the Fund.

The Fund shall be managed to accomplish the following:

- A. Enhance the total returns of the overall investment program for the participants of the Fund through broad U.S. stock market exposure at low cost;
- B. Deliver the performance results of the U.S. stock market defined as the Standard & Poor's 500 Stock Index, with broad stock diversification for the participants of the Fund; and
- C. Consider solely the interest of the Fund's participants and their beneficiaries in accordance with California State Law.

III. RESPONSIBILITIES AND DELEGATIONS

- A. The **System's Investment Committee** ("the Investment Committee") is responsible for approving and amending the Policy. The Investment

~~Committee has delegated the responsibility for administering the Deferred Compensation S&P 500 Equity Index Fund to the Investment Staff through the Delegation of Authority (Delegation Nos. 89-13 and 95-50).~~

~~B. The System's Investment Staff ("the Staff") duties include, but are not limited to, the following:~~

~~1. Developing and recommending the Policy to the System's Investment Committee;~~

~~2. Maintaining a procedures manual, subject to periodic reviews and updates, outlining Staff operational procedures used in implementing this Policy;~~

~~3. Implementing and adhering to the Policy;~~

~~4. Reporting immediately to the Investment Committee all violations of the Policy with explanations and recommendations;~~

~~5. Purchasing only securities outlined in the Policy; and~~

~~6. Reporting internally to senior management on the implementation of this Policy. This report shall be prepared monthly to include, but is not limited to, the following:~~

~~a. Current market value of the portfolio; and~~

~~b. Performance of the portfolio versus the benchmark as reported by the master custodian.~~

~~C. The General Pension Consultant ("the General Pension Consultant") is responsible for monitoring, evaluating, and reporting to the Investment Committee, at least quarterly, the Fund's performance relative to the benchmark and Policy guidelines.~~

~~Monitoring shall include placing the Fund on watchlist using the following criteria:~~

~~Watchlist Status: If the realized annual standard deviation of monthly return deviations (tracking error) is greater than 20 basis points but less than 40 basis points for two consecutive quarters, the Fund shall be placed on Watchlist Status.~~

~~If the realized annual standard deviation of monthly return deviations (tracking error) exceeds 40 basis points for two consecutive quarters, the Fund shall remain on Watchlist Status and further review may be required.~~

~~IV. PERFORMANCE OBJECTIVE~~

~~The realized annual standard deviation of such monthly return deviations (tracking error) shall be limited to 20 basis points. That is, 67% of such annual deviations of monthly returns shall be 20 basis points or less; 95% of such annual deviations of monthly returns shall be 40 basis points or less. The benchmark shall be the Standard & Poor's 500 Index (with dividends reinvested). This benchmark is capitalization weighted, designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.~~

~~V. INVESTMENT APPROACHES AND PARAMETERS~~

~~A. Investment Approach~~

~~The Fund shall be constructed in a manner that is consistent with achieving the stated performance objective. This shall necessitate a broadly diversified portfolio managed in a passive index approach with risk characteristics closely resembling the benchmark Index. The Fund normally holds all 500 securities in the Index. Since holding the exact number of shares in the benchmark can be expensive and cause constant rebalancing, an optimized index approach may be used to create an index that closely resembles the benchmark characteristics. Periodically, the Fund may consist entirely of derivative instruments to take advantage of mispricing between the cash market and the derivatives market.~~

~~The optimization approach to be used for the Fund employs a fundamental risk model. Using this model, the Fund's risk exposures versus those of the benchmark can be defined and decomposed. Fundamental risk models measure stock returns associated with industry and other fundamental factors such as Price/Earnings (P/E), yield, and market capitalization. Such fundamental factors are often referred to as "common" factors. A common factor is an element of return that influences many securities and hence is a "common factor" in the returns on those securities. Based on the Fund's current estimated exposure to industry and common factors, the volatility of returns can be measured. The information about volatility produced by a fundamental risk model can be used to evaluate portfolio risk, decompose portfolio risk according to common factor exposures, and evaluate how much of a portfolio's return in a given period was due to each common factor exposure and how much was due to stock selection.~~

~~Tracking error can be minimized by maintaining a portfolio's risk characteristics in line with the benchmark. However, a stock market index is a purely mathematical construction. Its performance shall inevitably be different from that of any actual portfolio. This is generally because indices~~

~~are constructed mathematically in ways that can never in practice be perfectly replicated. There are technical reasons why a portfolio cannot perfectly track a benchmark index:~~

- ~~1. The Index is fully invested at all times. An actual portfolio shall inevitably carry a small amount of cash.~~
- ~~2. The Index does not incur any costs, whereas an actual portfolio shall incur transactions costs.~~
- ~~3. The Index assumes the dividend is received and its proceeds are reinvested as soon as a stock goes ex-dividend. Thus, dividend proceeds are assumed to earn the Index rate of return from the ex-dividend date. However, the dividend may not actually be received into the Fund for several weeks.~~
- ~~4. Published benchmark return calculations vary. Reasons for variations include, but are not limited to, differences in calculations of outstanding shares for individual securities, timing of additions or deletions of members into the benchmark, or treatment of dividends.~~
- ~~5. Next-day contributions that are benchmarked to the prior day's closing price.~~
- ~~6. No fees are charged to the Index, but are charged to the fund.~~

~~B. Specific Risk Parameters~~

~~It is expected that the Fund shall be fully replicated. However, should an event arise such that the Fund cannot be fully replicated, tolerance ranges must be placed on the Fund's risk characteristics relative to those of the benchmark. The Fundamental Risk model decomposes systematic risk into that associated with six "common factors" and fifteen economic sectors.~~

~~The common factors are reported as standardized values (by subtracting the capitalization weighted mean for each stock's common factor value, and dividing by the cross sectional standard deviation), thus allowing comparative analysis between different common factor unit values. The six common factors, and their respective tolerance ranges are as follow:~~

- ~~1. **Historical Beta** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~

- ~~2. **Dividend Yield** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~
- ~~3. **Market Capitalization** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~
- ~~4. **Earnings/Price Ratio** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~
- ~~5. **Market/Book Ratio** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~
- ~~6. **Interest Sensitivity** - The Fund's standardized exposure shall not exceed more than +/- .01 standard deviations from the benchmark's standardized exposure.~~
- ~~7. **Economic Sectors** - The tolerance range for the fifteen economic sectors in the Fund shall be kept within 35 basis points of the benchmark's exposure. This shall limit monthly tracking error due to each economic sector weighting difference to less than 4 basis points with 95% probability.~~
- ~~8. **Non-systematic Risk** (residual risk) - This is caused by different individual security weightings in the Fund relative to that of the index. Securities in the Fund in excess of +/- 3 basis points of the security's weight in the Index, shall be screened and evaluated for possible action to decrease/increase the security's weight in the Fund towards the benchmark weight.~~
- ~~9. **Model Risk** - This addresses whether the model used to forecast risk produces an unacceptably large bias in the portfolio optimization.~~

~~C. **Restrictions**~~

~~All risk characteristics of the portfolio must be within the permissible ranges specified in Part V.B.~~

~~D. **Permissible Securities**~~

- ~~1. Common stock and ADRs included within the Standard & Poor's 500 Index.~~

~~2. The Fund may temporarily hold common stocks and ADRs, which are not represented in the designated benchmark. Such holdings are justified on the basis of the following:~~

~~a. Liquidity constraints or excessive transaction costs, such as those required to sell certain securities obtained from corporate actions or from past benchmark reconstitutions;~~

~~b. Timing of corporate action processing; and~~

~~c. Expectation of inclusion in the benchmark due to announced changes in benchmark constitution.~~

~~E. Corporate Actions~~

~~Corporate actions (e.g., tender offers, mergers, Dutch-auctions, and spin-offs) shall be managed on a case-by-case basis.~~

~~F. Rebalancing and Trading Activity~~

~~It is expected that the Fund shall be fully replicated. However, if there is a decision to re-balance the Fund, it shall be primarily based upon analysis of the monthly risk and performance attribution reports. Fund rebalancings shall be performed as is deemed necessary to maintain the Fund's risk characteristics in line with those of the benchmark. At a minimum, the Fund shall be reviewed monthly. Internal Equity Optimizer software shall be used to affect the rebalancings. The normal objective function of the optimization is to reduce systematic and nonsystematic risk of the Fund relative to the benchmark while minimizing transaction costs.~~

~~A variety of trading techniques and liquidity sources shall be utilized to obtain the best execution of the approved internal trade list.~~

~~VI. BENCHMARK~~

~~The benchmark shall be the Standard & Poor's 500 Index (with dividends reinvested). This benchmark is capitalization weighted, designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.~~

~~VII. GENERAL~~

~~Investors, managers, consultants, or other participants selected by the System shall make all calculations and computations on a market value basis as recorded by the System's Custodian.~~

~~VIII. DERIVATIVES AND LEVERAGE POLICY~~

~~Derivative instruments may be used to facilitate cost and risk management of investing in stocks publicly traded in the U.S.~~

~~A. Permitted Strategies~~

- ~~1. **Substitution** - When the characteristics of the derivative sufficiently parallel those of the cash market instrument, the derivative may be a substituted for the cash market instrument. This strategy is particularly useful when investing cash flow or liquidating investments, as the derivative can be used to manage market entry and exit points more precisely.~~
- ~~2. **Risk Control** - When characteristics of the derivative instrument or a combination of derivatives sufficiently parallel those of the cash market instrument, an opposite position in the derivative can be taken from the cash market instrument to alter the exposure to or the risk (volatility) of the cash instrument. This strategy is useful to manage risk without having to sell the cash instrument.~~
- ~~3. **Arbitrage** - When the price of a derivative is more attractive than either the cash market instrument or another related derivative, then the cheaper derivative is purchased, or swapped for the cash market instrument to garner the short-term return potential from the mispriced instrument. This strategy is used to capture mispricing in the derivative instrument relative to either the cash market instrument or another derivative.~~

~~B. Uses~~

- ~~1. To equitize cash and dividends receivable;~~
- ~~2. To capture mispricings between the futures contract and the underlying basket of securities; and~~
- ~~3. To lower transaction costs.~~

~~C. Restrictions~~

- ~~1. Leverage is prohibited. The use of derivative instruments as specified in this Policy shall not constitute leverage.~~
- ~~2. Uncovered call writing when constituting leverage is prohibited.~~

~~3. Traders are limited in their authorization to trade permissible derivative instruments to only the notional value of the portfolio.~~

~~4. Speculation is prohibited.~~

~~D. Permissible Derivatives~~

~~Permissible derivatives may include, but are not limited to, the following:~~

~~1. Index Futures;~~

~~2. Index Options;~~

~~3. Options on individual stocks contained in the Index; and~~

~~4. Swaps that provide for the receipt of cash flows to equal the rate of return of the S&P 500 Index or any of its constituents.~~

~~E. Permissible Short-term Investments~~

~~Short-term investments are used in connection with the aforementioned Derivatives Policy. For most derivatives, collateral is required for initial margin purposes. The cash in excess of initial margin is then invested in other short-term investments. The following short-term investments are permitted:~~

~~1. Investments issued and backed by the full faith and credit of U. S. Treasury;~~

~~2. Commercial Paper rated A2/P2 or better; and~~

~~3. State Street Investment Fund (STIF).~~

~~F. Counter-party Requirements~~

~~1. Counter-party creditworthiness shall be equivalent to "investment grade" of "A3" as defined by Moody's Investor Service or "A-" by Standard and Poor's. The use of counter-parties holding a split rating with one of the ratings below A3/A- is prohibited. Staff shall notify the Chief Investment Officer if a counter-party is downgraded below A3/A- while an instrument held in the Fund is outstanding with the specific counter-party. The use of unrated counter-parties is prohibited.~~

~~2. For non-exchange traded derivatives, if the notional amount is greater than the lesser of \$10 million or 1% of the total Fund, then Staff shall not proceed without an opinion from the General Pension~~

~~Consultant. The General Pension Consultant's positive opinion is required before an investment can be made. The General Pension Consultant shall provide a written opinion on the particular derivative strategy and the Investment Staff shall evaluate the potential counter-party exposure. The Chief Investment Officer and Senior Investment Officer for Public Markets must approve each non-exchange traded derivative transaction in advance.~~

~~G.General Requirements~~

- ~~1. The proportion of portfolio value invested in derivative instruments can grow to 100% depending on liquidity constraints and the specific strategy employed.~~
- ~~2. Managers must rely on the master custodian to reconcile daily cash and margin positions.~~

~~VIII.GLOSSARY OF TERMS~~

~~Definitions for key words used in this policy are located in the Equity Glossary of Terms which is included in the System's Master Glossary of Terms.~~

~~Approved by the Policy Subcommittee: October 6, 2000~~

~~Adopted by the Investment Committee: November 13, 2000~~

~~Revised by the Policy Subcommittee: December 10, 2004~~

~~Adopted by the Investment Committee: February 14, 2005~~

Asset Class Glossary: Equities
Policy: Deferred Compensation S&P 500 Equity Index Fund - Internally Managed
March 17, 2008

American Depositary Receipts (ADRs)

Receipts for the shares of a foreign-based corporation held in the vault of a U.S. bank. ADRs, which are denominated in U.S. dollars, allow U.S. investors to get exposure to foreign stocks within the U.S. stock exchanges.

Capitalization Weighted

A weighting method based on the equity market capitalization of a stock. Market capitalization is calculated by multiplying the total outstanding shares of a stock by its price per share.

Common Factor

An element of return that influences many securities and, hence, is a "common factor" in the returns on those securities. By virtue of their common influence on many stocks, common factors contribute to market return as well as residual returns of the stocks that they influence most. Some common factors for domestic equity are capitalization, beta, price/earnings, price/book, interest sensitivity, and yield.

Corporate Actions

An action taken by a company that causes a material change in structure including, but not limited to, name, price, shares, capitalization, or other such events. Typical corporate actions include tender offers, mergers, Dutch auctions, and spin-offs.

Derivative

An instrument whose value is based on the performance of an underlying financial asset, index, or other investment. Classes of derivatives include futures contracts, options, currency forward contracts, swaps, and options on futures.

Dividend Yield

An indication of the dividend generated by a stock. The yield is calculated by dividing annual dividends per share by price per share.

Dutch-Auction

A system in which the price of an item is gradually lowered until it meets a responsive bid and is sold.

Earnings/Price Ratio

The relationship of earnings per share to current stock price. The stock's trailing 12 months of reported earnings is often used as the earnings per share figure.

Equitize

Combining cash with derivative instruments to produce returns comparable to the equity market.

Fundamental Risk Model

A model used to predict the risks of individual stocks using fundamental and technical information. A covariance matrix is constructed from the factor's standard deviations and the correlations between one another. This covariance matrix can be used to predict the risk characteristics of a portfolio.

Historical Beta

The figure calculated by regressing 60 months of a stock's total return against the monthly total returns of a broadly diversified index, after subtracting the T-Bill's rate of return from both.

Interest Sensitivity

The figure calculated by regressing 60 months of a stock's total return against the monthly total returns of a long bond index, after subtracting the T-Bill's rate of return from both.

Leverage

A condition where a portfolio's market obligation may exceed the market value-adjusted capital commitment by the amount of borrowed capital (debt).

Market Capitalization

A stock's current market price multiplied by the current common shares outstanding.

Market/Book Ratio

A stock's equity market value, divided by book value at the most recently available fiscal year end (assets minus liabilities).

Mean

The value that is to be expected on average. Among many repetitions or trials of a random process, the mean shall be the average value.

Merger

The combination of two or more companies. Strictly speaking, only combinations in which one of the companies survives as a legal entity are called mergers.

Nonsystematic Risk

That part of a total return that cannot be explained by a single or multi-factor model of returns. Such components of return can be diversified away in a sufficiently large and well-diversified portfolio.

Objective Function

The objective function consists of the targets, penalties, rewards, and constraints selected in the optimization setup. It reflects the investment policy or goal.

Optimization

The best solution among all solutions available for consideration. Constraints on the

investment problem limit the region of solutions that are considered and the objective function for the problem by capturing the investor's goals correctly, providing a criterion for comparing solutions to find the better ones. The optimal solution is the solution among those admissible for consideration that has the highest value of the objective function.

Optimizer

Mathematical algorithm that maximizes an objective function subject to minimizing given constraints.

Performance Attribution

The process of attributing portfolio returns to causes. It decomposes past performance into separate components or factors contained within a multi-factor model.

Rebalancing

Modeling a portfolio through an optimizer to obtain roughly equal buy and sell trade lists.

Return Deviation

The difference between the total return of a portfolio and the total return of the benchmark index.

Speculation

Assumption of risk in anticipation of gain but recognizing a higher than average possibility of loss.

Standard Deviation

A statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. It is widely used as a measure of risk for portfolio investments. It is the square root of variance. In a symmetrical distribution, such as the normal distribution, approximately two-thirds of all outcomes fall within ± 1 standard deviation, and approximately 95 percent of all outcomes fall within ± 2 standard deviations.

Systematic Risk

That portion of total return that can be explained by a single or multi-factor model of returns. Such components of return are directly proportional to the market's return and cannot be eliminated by diversification.

Tracking Error

The annualized standard deviation of the difference between the total return of the portfolio and the total return of the benchmark. The term tracking error is frequently used to describe return deviation, the total return of a portfolio, minus the total return of a benchmark index.

Watchlist Status

Indicates a level of concern, the degree of which shall be unique to each situation with the parameters specified in the relevant policy.